

REMARKS

The status of the claims appears above. By this Amendment, claim 25 is canceled without prejudice or disclaimer, and claims 9, 18, and 26 are amended. The amendments to claims 9 and 26 correct typographical errors and clarify the language.

The Office Action repeats the restriction requirement that was originally made orally. Applicants believe that the restriction requirement is improper as argued in the March 7, 2003, response and because the method and product recited herein are part of the same invention as the method of claims 1-16 give rise to the product of claim 17 and claims 18-26 involve the product of claim 17. However, as the restriction has been maintained, applicants affirm the withdrawal of claims 1-16 from consideration at this time. It is requested that upon allowance of subject matter in claims 17-24 and 26, the requirement again be revisited and claims 1-16 be rejoined for examination. Also, it is requested that the correction to claim 9 be entered, although this claim is withdrawn from consideration, so that a correct version of the claims is maintained in the application.

Claims 25 and 26 are objected to due to an extraneous phrase. By this Amendment, claim 25 is canceled, and claim 26 is amended to clarify the claim and remove the extraneous phrase. It is requested the objection be withdrawn.

Claims 17-26 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,205,016 to Niu. The Office Action states that the claimed product appears to be substantially identical to the product of the reference and the applicant has the burden to establish an unobvious difference between the claimed product and the prior art product. In this case, the claimed product is different from the product produced in Niu.

Niu discloses a fibril composite electrode that is formed by the processes described in col. 9, which explains that when the active material is carbon or conducting polymer, the conducting polymer and fibrils (carbon nanofibers) are each separately suspended in water.

The dispersions are mixed together, and the mixture is filtered and washed to yield a composite electrode comprising a fibril mat and electrochemically active material. Niu does **not** disclose or unitary polymer mass containing nanotubes dispersed therein.

*how is it different from a composite?*

In distinction, according to this invention an electronically conducting polymer/carbon nanotube composite is formed and includes a unitary polymer mass containing nanotubes dispersed therein. The mass is formed by preparing a dispersion of carbon nanotubes in a solution of one or more polymerisable monomers which form an electronically conducting polymer upon polymerisation. So, each individual carbon nanotube is covered with a thin layer of polymer. This is described on page 16, lines 15-24, that explains that the carbon nanotubes are electrostatically and/or physically entrapped in the film. This entrapment results in superior electrical energy storage properties, as explained on page 37, beginning on line 3 and continuing to page 38, stating "we have established that a uniform coating of all nanotubes in the film, including those concealed inside the film, can be obtained by depositing the carbon nanotubes at the same time as the redox material (conducting polymer)... The excellent performance of these devices is related to the structure of the composite films, which makes use of the large surface area of the carbon nanotubes and the excellent pseudo-capacitive response of the conducting coating on each nanotube."

*claimed! where is the space? this?*

Claim 17 recites an electronically conducting polymer/carbon nanotube composite produced by preparing a dispersion of carbon nanotubes in a solution of one or more polymerisable monomers which upon polymerisation form an electronically conducting polymer. A unitary polymer mass containing the nanotubes dispersed therein is formed by polymerising the monomer solution.

Claim 18 recites an electrical energy storage device comprising a first electrode consisting of a first composite of carbon nanotubes and a first electronically conducting

polymer and a first conducting member in contact with the first composite. The device also includes a second electrode and an electrolyte comprising mobile cations and anions. The electrolyte separates the first and second electrodes and is in contact with the first composite. The first composite consists of a unitary polymer mass containing carbon nanotubes dispersed therein and is formed by preparing a dispersion of carbon nanotubes in a solution of one or more polymerisable monomers, which upon polymerisation form an electronically conducting polymer. The monomer solution is polymerised to form the unitary polymer mass.

Claim 26 is directed to an electrical energy storage device comprising a first electrode comprising a first composite of carbon nanotubes and a first electronically conducting polymer. A first conducting member is in contact with the first composite. A second electrode comprises a second composite of carbon nanotubes and a second electronically conducting polymer. A second conducting member is in contact with the second composite. An electrolyte comprises mobile cations and anions. The electrolyte separates the first and second electrodes and is in contact with the first composite. Each of the first and second composite consists of a unitary polymer mass containing carbon nanotubes dispersed therein and is formed by preparing a dispersion of carbon nanotubes in a solution of one or more polymerisable monomers, which upon polymerisation form an electronically conducting polymer. The monomer solution is polymerised to form a unitary polymer mass.

Niu does not disclose individual carbon nanotubes covered with a uniform thin layer of polymer. Further, Niu does not disclose a mass as claimed above. Therefore, Niu cannot anticipate claims 17, 18 or 26 or the claims that depend therefrom. Further, there is no motivation in the prior art for modifying Niu to obtain such a mass and no suggestion how such a modification could be accomplished.

It is submitted that the claims are allowable over Niu and that the application is in condition for allowance. Should further issues require resolution prior to allowance, the Examiner is requested to contact the undersigned.

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Respectfully submitted

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